



## Reliable, Accurate Wind Measurements

Compatible with most Campbell Scientific data loggers

### Overview

The 034B, manufactured by Met One, combines a three-cup anemometer and vane into a single integrated package to measure wind speed and direction. It is cabled for use with our

data loggers, and it can provide you with measurements for a variety of applications.

### Benefits and Features

- Designed for continuous, long-term, unattended operation in adverse conditions
- Constructed of lightweight aluminum

### Detailed Description

The 034B monitors wind speed using a three-cup anemometer that contains a sealed magnetic reed switch. Rotation of the cup wheel produces a pulse that is directly proportional to wind speed. The frequency of the pulse is measured by the data logger pulse count channel, then converted to engineering units (mph, m/s, knots).

Wind direction is sensed with a potentiometer. With the precision excitation voltage from the data logger applied to the potentiometer element, the output signal is an analog voltage that is directly proportional to the azimuth of the wind direction.

### Specifications

Applications	General (Rain with light snow. Little or now riming or blowing sand. No salt spray.)
Sensor	3-cup anemometer and vane
Measurement Description	Wind speed and direction

Operating Temperature Range -30° to +70°C

Weight 907 g (2.0 lb)

#### Wind Speed (Anemometer)

Range 0 to 75 m/s (0 to 167 mph)

Starting Threshold	0.4 m/s (0.9 mph)
Sensor Output	Pulsed contact closure
Accuracy	<ul style="list-style-type: none"> <li>» 0.1 m/s (0.25 mph) at &lt; 10.14 m/s (22.7 mph)</li> <li>» <math>\pm 1.1\%</math> of true at &gt; 10.14 m/s (22.7 mph)</li> </ul>
Resolution	$(0.7998 \text{ m s}^{-1}) / (\text{scan rate in seconds})$ or $(1.789 \text{ mph}) / (\text{scan rate in seconds})$
Anemometer Radius	10.7 cm (4.2 in.)
Anemometer Height	24.4 cm (9.6 in.)

Output Signal	Contact closure (reed switch)
<b>Wind Direction (Vane)</b>	
Mechanical Range	360°
Electrical Range	356° (4° open)
Accuracy	$\pm 4^\circ$
Damping Ratio	0.25
Resolution	< 0.5°
Potentiometer Resistance	0 to 10 kΩ (open at crossover)
Threshold	$0.4 \text{ m s}^{-1}$ (0.9 mph)
Vane Length	33.5 cm (13.2 in.)